

82614
J. Douglas
7/15/04
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT
APPEALS AND INTERFERENCES

Applicants: S. J.
Vornsand

Serial No.: 09/852,883

Filed: May 11, 2001

For: **CLOSED LOOP
TELEVISION CONTROL SYSTEM**

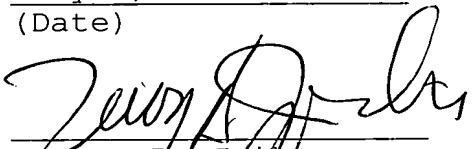
Group Art Unit: 2614

Examiner: B. P. Yenke

Attorney Docket
No.: 7187

) I hereby certify that this
) paper is being deposited
) with the United States
) Postal Service as first
) class mail, postage pre-
) paid, in an envelope ad-
) dressed to: Commissioner
) for Patents, P.O. Box
) 1450, Alexandria, VA
) 22313-1450 on this date:

) July 1, 2004
) (Date)

) 
) Trevor B. Jolke
) Reg. No. 25,542
) Attorney for Appellants

APPELLANT'S BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RECEIVED

JUL 09 2004

Technology Center 2600

Sir:

Pursuant to the provisions of 37 CFR §1.192,
Appellants submit the following brief.

1. Real Party in Interest

The real party in interest is Zenith
Electronics Corporation of Lincolnshire, IL.

09852883
07/08/2004 RHEBRAHT 00000064 260175
01 FC:1402 330.00 DA

2. Related Appeals and Interferences

There are no other appeals and interferences known to Appellants, Appellants' legal representatives or assignees which will directly affect or be affected by or have a bearing on the Board's decision in the pending appeal.

3. Status of Claims

Claims 31-41 are finally rejected. Claims 42-46 are pending but the final rejection of these claims is not being appealed.

4. Status of Amendments

All amendments submitted prior to this brief have been entered.

5. Summary of the Invention

A television system 20 includes a single host device 24 that controls televisions 22 in response to input signals or request signals. The host device 24 ensures that each of the televisions 22 has successfully completed a function after it has been commanded to do so.

Input devices 26 may be provided directly on the host device 24, as are switches 28, or the input devices 26 may be provided on one or more of the televisions 22, as are switches 30. The input devices 26 may also include one or more peripheral devices 32 such as a video cassette recorder 34, a digital video disc player 36, a computer or internet interface module 38, or the like coupled to the host device 24. The host device 24 may further be connected to a control 40, such as

automatic source switching, that is normally not accessible to the user, and/or the host device 24 may be connected to an external control 42, such as a serial digital interface control. A remote control unit 44 may also be in communication with the host device 24. Alternatively, the host device 24 may be provided in the form of a remote control unit such as the remote control unit 44.

The host device 24 and the television 22 are shown in more detail in Figure 2. The television 22 includes a processor 46 operatively connected to internal television devices such as a tuner 48, video and audio processors 50, and switches 52. The processor 46 may also be connected to a keyboard 54 or other type of switch, to a timer 55, and to the computer or internet interface module 38. The television 22 further includes a signal transmitter 56 and a signal receiver 58.

The host device 24 includes a signal transmitter 60, a signal receiver 62, and a processor 64. The remote control unit 44 includes a signal transmitter 65. The signal receiver 62 receives input or request signals 66, such as those generated by the remote control unit 44, the switches 28 and 30, and/or the peripheral devices 32. The signal transmitter 60 generates and transmits command signals 68 for control of each of the televisions 22. Furthermore, after the command signals 68 are successfully received by each of the televisions 22, and after the televisions successfully perform the functions dictated by the command signals 68, each television 22 transmits a confirmation signal 70. The signal receiver 62 of the host device 24 receives the confirmation signal 70 and, therefore, the host device 24 is assured that a prior function has been successfully

accomplished before the host device 24 proceeds to command further functions to be performed by the televisions 24.

The flow charts of Figures 3 and 4 depict an exemplary sequence of steps which may be performed by the host device 24 and the televisions 22, respectively, whereby the host device 24 receives confirmation that the televisions 22 have successfully performed a function requested by the host device 24.

The host device 24 receives a request signal 66, and the host device 24 determines whether the confirmation signal 70 has been received from each television 22 in response to the previous request signal 66. If the confirmation signal 70 has not been received, the host device 24 generates an error signal. If the confirmation signal 70 has been received, the host device 24 generates and transmits the next command signal 68 to the televisions 22.

Each television 22 receives the command signal 68 and performs the requested function. Each of the televisions 22 that successfully performs the function commanded by the command signal 68 transmits the confirmation signal 70. However, no confirmation signal is generated by any of the televisions 22 that are unable to perform the commanded function. In this latter case, the host device 24, for example, may resend the command or take other appropriate action.

Each of the televisions 22 that transmits the confirmation signal 70 delays the transmission of the confirmation signal 70 for a predetermined period of time. The predetermined period of time may be of any suitable length, such as within the range of 100 to 500 milliseconds. The confirmation signal 70 is transmitted

by modulating data onto a 40 KHz carrier wave, and contains a 1200 baud, 8 bits byte, 1 start bit, 1 stop bit, no parity format packet. The packet preferably consists of three bytes including a command identifier byte, a data value byte, and a check sum byte which is the modulo 256 sum of the first two bytes.

6. Issue Appealed

Whether claim 31 is unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 6,532,592 (hereinafter, "the Shintani '592 patent") in view of U.S. Patent No. 6,603,488 (hereinafter, "the Humpleman '488 patent").

7. Grouping of Claims

For purposes of this appeal, dependent claims 32-41 may be grouped with independent claim 31.

8. Argument

The Shintani '592 Patent

The Shintani '592 patent discloses a remote control 100 and a television set 101 each having a transmitter and a receiver such that signals can be communicated between the remote control 100 and the television set 101 by way of a communications link 102. The television set 101 can send a confirmation signal to the remote control 100 when a valid instruction is received by the television set 101 from the remote control 100. Alternatively, the television set 101 can send an error signal to the remote control 100 when an invalid instruction is received by the television set 101 from the remote control 100. The television set 101 can send a prompt signal to the remote control 100 when an

instruction received by the television set 101 from the remote control 100 requires additional input in order to execute the instruction. The remote control 100 has a display 103 that can display a listing of sub-channels or an electronic program guide received from the television set 101. The television set 101 can transmit commands from the remote control 100 to a peripheral device.

The Humpleman '488 Patent

The Humpleman '488 patent discloses a home network 100 having a serial bus 114 that electronically interconnects a digital television 102, a satellite receiver 104, a DVD 108, a VCR 110, and a security system 120. The digital television 102 provides the human interface for the home network 100 by employing browser technology to allow users to control and command the other devices over the home network 100. Alternatively, this interface may be provided by a remote control.

This human interface includes a device link page 402 that is shown in Figure 5 and that contains buttons 406 corresponding to the home devices connected to the home network 100. Each button 406 is associated with a hypertext link to the top-level home page of the corresponding home device. As shown in Figure 6, the buttons 406 may be in the form of icons and, as shown in Figure 7, the buttons 406 may be arranged in groups.

A session page 702 (Figure 8) is generated as an interface displayed on the digital television 102. The session page 702 allows the user to command and control the home devices that are connected to the home network 100 in order to perform various functions and/or services such as starting play of a movie, programming a satellite receiver, and recording a television program.

The session page 702 contains frames 704, 706 and 708. The frame 704 contains a device link page 710 that contains device buttons 712 for the home devices connected to the home network 100. As shown in Figure 10, if the user selects the device button 712 for Dad's TV, the top-level home page 804 for Dad's TV is displayed in the frame 706. If the user then selects a second device button, such as the device button 712 corresponding to Jim's DVD, the top-level home page 904 for Jim's DVD is displayed in the frame 708 (Figure 11). In this case, Dad's TV and Jim's DVD, having been selected, can communicate with each other to set up and perform the desired service as selected by the user through use of the options displayed on the home pages 804 and 904.

Issue

Independent claim 31 is directed to a television control system comprising a host device and a plurality of dispersed televisions. The host device has a host processor, a host receiver, and a host transmitter. The host processor controls the host transmitter to transmit command signals, and the host processor processes confirmation signals received by the host receiver. Each of the plurality of dispersed televisions has a television processor, a television receiver, and a television transmitter. Each television processor processes the command signals received by a corresponding television receiver, and each television processor controls a corresponding television transmitter to transmit the confirmation signals upon performance of functions commanded by the command signals.

As can be seen, the Shintani '592 patent does not disclose communication between a host device and a plurality of dispersed televisions such that each television transmits to the host device a confirmation signal that the television has performed a function commanded by a command signal that the television receives from the host device.

The Examiner recognizes that the Shintani '592 patent does not disclose a television that transmits the confirmation signal recited in independent claim 31. However, the Examiner points out that the Shintani '592 patent does disclose (i) that the television set 101 sends a confirmation signal to the remote control 100 to confirm receipt of an instruction from the remote control 110 and (ii) that the television set 101 sends an error signal to the remote control 100 when an invalid instruction signal is received by the television set 101 from the remote control 100. The Examiner then argues that it would have been obvious to transmit an additional signal confirming execution of an instruction as a way of additionally confirming that a valid message has been performed.

However, the disclosure of a confirmation signal that confirms receipt of a message and an error signal indicating that a received message has an error does not suggest to one of ordinary skill in the art of the need or desirability of a confirmation signal confirming execution of an instruction by a television.

First, none of the art cited by the Examiner discloses or suggests to one of ordinary skill in the art the need or desirability of a confirmation signal that confirms execution of a function by a television. The Shintani '592 patent shows a remote control that is

typically used in view of the television that it controls so that the user of the remote control can observe the behavior of the television directly to determine whether the commanded function has been executed. Thus, there is no need for a confirmation signal indicating that the television has indeed performed the function.

Moreover, the confirmation signal that indicates valid or invalid receipt of the command from the remote control is provided to obviate the need for the remote to send the command in a number of repetitions to make sure that the television receives the command. Power can be saved by sending the command only once and receiving back from the television a signal indicating that the received command is valid, in which case the command need not be re-transmitted, or is invalid, in which case the command needs to be re-transmitted.

Moreover, the Shintani '592 patent discloses that the valid and invalid confirmation signals are alternatives, thus teaching away from the use of an additional signal. That is, the Shintani '592 patent teaches that only a single message is necessary to confirm receipt of a valid message, i.e., either a valid message confirmation message or a non-valid error message.

The Humpleman '488 patent, by disclosing a plurality of dispersed controllable devices and by not disclosing that such devices transmit confirmation messages back to the host device, suggests that no confirmation messages are necessary. Moreover, the Humpleman '488 patent does disclose that an icon image version may be dependent on a device's representative state in order to provide feedback to the user as to the particular state of the home device. However, the

Humpleman '488 patent does not suggest that the state of an icon is based on confirmation messages transmitted by the television to the host, but only that the state of the icon depends on selections made by the user. Thus, the Humpleman '488 patent merely suggests that, when a user clicks on an icon, the state of the icon changes in response to the click, not in response to a confirmation message transmitted by a television to the host device. In effect, the Humpleman '488 patent teaches that confirmation signals are unnecessary and that acknowledge of an instruction may be given by changing the state of the icon when the user clicks on it.

The background section of the present application merely states that one or more televisions can be controlled from a central host device, that communications between the host device and the televisions is provided in only one direction, and that a function of the televisions requested by the host device has been successfully accomplished. Accordingly, the background section of the present application does not suggest the use of a confirmation signal as recited in independent claim 31.

Moreover, none of the prior art suggests the advantage of using the confirmation signal as recited in independent claim 31 in a system involving multiple dispersed televisions. That is, when televisions are dispersed so that they cannot all be observed by a user who controls the televisions, it is important that the host device controlling the dispersed televisions know that the dispersed televisions have received and executed the commands transmitted by the host device.

The Shintani '592 patent does not disclose or suggest this importance or any other importance that

would suggest the use of the confirmation signal as recited in independent claim 31 in a system involving multiple dispersed televisions. Instead, the Shintani '592 patent discloses that the purpose of confirming receipt of a command is to eliminate the prior art requirement of transmitting a command from the remote control multiple times to increase the likelihood that the television receives the command. This purpose does not suggest using a confirmation signal to confirm proper execution of the command.

The Humpleman '488 patent likewise does not disclose or suggest any importance that would suggest the use the confirmation signal as recited in independent claim 31 in a system involving multiple dispersed televisions.

Second, the Examiner has offered a mere conclusion that a confirmation signal confirming execution of an instruction by a television is desirable. The Examiner has not offered any evidence or reasoning to demonstrate that such desirability would have been known or suggested to or within the skill of one of ordinary skill in the art.

Accordingly, because neither the Shintani '592 patent nor the Humpleman '488 patent would have suggested to one of ordinary skill in the art the sending of confirmation signals upon performance of functions commanded by a command signal, independent claim 31 is not unpatentable over the Shintani '592 patent in view of the Humpleman '488 patent.

In the Advisory Action, the Examiner argues that, because the Shintani '592 patent discloses the acknowledgement of a valid or invalid signal, and because the television would then go on to execute the command in

the valid signal, the additional confirmation that the command was performed would have been obvious to one of ordinary skill in the art.

However, as discussed above, this argument is merely conclusory. The Examiner has offered no explanation as to why additional confirmation of command performance would have been obvious to one of ordinary skill in the art. As discussed above, none of the art cited by the Examiner would have suggested such a confirmation signal to one of ordinary skill in the art.

Specifically, the remote control shown in the Shintani '592 patent is typically used in view of the user of the television so that such a confirmation signal is unnecessary. The specific valid and invalid message signals disclosed in the Shintani '592 patent are provided for purposes that do not suggest a confirmation signal as recited in independent claim 31 to one of ordinary skill in the art. The valid message signal prolongs remote control battery life by eliminating the requirement of transmitting each signal from the remote control to the television multiple times. The invalid message signal serves the same purpose because the remote control, if it receives an invalid message signal from the television, is prompted to re-transmit the original command signal. Neither the valid message signal nor the invalid message signal, therefore, suggests the confirmation signal recited in independent claim 31.

The Humpleman '488 patent and none of the other art applied by the Examiner discloses or suggests any confirmation signals at all.

Accordingly, because there is no suggestion to one of ordinary skill in the art to include receipt by the remote control disclosed in the Shintani '592 patent

of a confirmation signal that indicates performance of a function by a television, independent claim 31 is not unpatentable over the Shintani '592 patent in view of the Humpleman '488 patent.

9. Conclusion

For the foregoing reasons, reversal of the Final Rejection is respectfully requested.

10. Appendix

The Appendix containing a copy of the claims involved in this appeal is attached hereto.

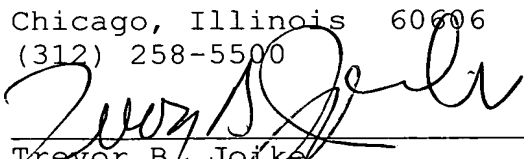
This brief is being filed in triplicate as required by 37 C.F.R. §1.192.

The Commissioner is hereby authorized to charge Account No. 26 0175 for \$330.00 (fee set forth in 37 C.F.R. §1.17(c)) and any additional fees which may be required, or to credit any overpayment to Account No. 26 0175.

Respectfully submitted,

Schiff Hardin LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
(312) 258-5500

By:


Trevor B. Joike
Reg. No: 25,542

July 1, 2004



APPENDIX

31. A television control system comprising:
a host device having a host processor, a host receiver, and a host transmitter, wherein the host processor controls the host transmitter to transmit command signals, and wherein the host processor processes confirmation signals received by the host receiver; and,
a plurality of dispersed televisions each having a television processor, a television receiver, and a television transmitter, wherein each television processor processes the command signals received by a corresponding television receiver, and wherein each television processor controls a corresponding television transmitter to transmit the confirmation signals upon performance of functions commanded by the command signals.

32. The television control system of claim 31 wherein each of the command and confirmation signals comprises an infrared signal.

33. The television control system of claim 31 further including at least one peripheral device generating a request signal, wherein the host device is responsive to the request signal.

34. The television control system of claim 33 wherein the peripheral device comprises a video cassette recorder.

35. The television control system of claim 33 wherein the peripheral device comprises a digital video disc player.

36. The television control system of claim 31 wherein the host device comprises a personal computer.

37. The television control system of claim 31 wherein the host device comprises a television remote control unit.

38. The television control system of claim 31 wherein each of the televisions further includes a timer, and wherein the television processor of each of the televisions is responsive to a corresponding one of the timers to cause a corresponding one of the television transmitters to transmit the command signals within about 100 milliseconds to about 500 milliseconds after a function commanded by one of the command signals is performed.

39. The television control system of claim 31 wherein each of the confirmation signals comprises a 1200 baud, 8 bits byte, 1 start bit, 1 stop bit, no parity format packet modulated onto a 40 KHz carrier wave.

40. The television control system of claim 39 wherein the packet includes a command identifier byte, a data value byte, and a check sum byte.

41. The television control system of claim 31 wherein the host processor is arranged to generate an error signal in the event that a confirmation signal is not received by the host receiver from at least one of the televisions.